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EXAMINER
REILLY, SEAN M

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _23 April 2007_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-48_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-48_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

This Office action is in response to Applicant's amendment and request for reconsideration filed on April 23, 2007. Claims 1-48 are presented for further examination. On April 26, 2007 an interview was conducted with Applicant. During this interview Applicant authorized claim amendments to place this application in condition for allowance. Upon further search and consideration these claims are no longer deemed allowable.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. **Claims 15-28 and 34-48 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

   With regard to claims 15-28 and 41-48, Applicant's specification ¶ 34 provides evidence that Applicant intends the scope of a computer readable medium or memory device to include a solid or fluid transmission medium hence, each claim is drawn to a form of energy. Energy is not one of the four categories of invention and therefore these claims are not statutory. Energy is not a series of steps or acts and thus is not a process. Energy is not a physical article or object and thus is not a machine or manufacture. Energy is not a physical article or object and thus is not a composition of matter. Note the term "tangible" as used in claims 15-28 is not given patentable weight since artisans in the art have various opinions as to the scope of this term. Applicant may overcome this rejection by removing the term *tangible* from claims 15-28 and adding the term *computer readable storage medium* to claims 15-28. Claims 41-48 are additionally rejected

under the rationale that they only recite nonfunctional descriptive material (i.e. a linked list).

When nonfunctional descriptive material is recorded on some computer-readable medium, in a

computer or on an electromagnetic carrier signal, it is not statutory since no requisite

functionality is present to satisfy the practical application requirement. Merely claiming

nonfunctional descriptive material, i.e., abstract ideas, stored in a computer-readable medium, in

a computer, does not make the subject matter statutory.

With regard to claims 34-40, these claims recite various components or *means for*

elements that may be implemented solely in software and are thus software per se (see inter alia,

Applicant's specification ¶ 98). As recited in the interim guidelines pg 53 "computer programs

claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not

physical 'things.' They are neither computer components nor statutory processes, as they are not

'acts' being performed" (Interim Guidelines for Examination of Patent Applications for Patent

Subject Matter Eligibility" signed October 26th, 2005). No "acts" are performed because the

"claimed computer programs do not define any structural and functional interrelationships

between the computer program and other claimed elements of a computer which permit the

computer program's functionality to be realized." Thus, claims 34-48 are directed to non-

statutory subject matter. Applicant may overcome this rejection by embodying the claimed

computer programs on a computer readable storage medium.

Applicant is invited to review the latest "Interim Guidelines for Examination of Patent

Applications for Patent Subject Matter Eligibility" (signed October 26th, 2005) which further

clarifies computer-related nonstatutory subject matter on pages 50-57.

<http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf>

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

1. **Claims 1-43, 45, and 47-48 are rejected under are rejected under 35 U.S.C. 103(a) as**

   being unpatentable over Gheith (U.S. Patent Number 7,082,454) and Gupta et al. (U.S.

   Patent Number 6,553,461; hereinafter Gupta).

   In considering claim 1, Gheith discloses a method in a data processing system for

facilitating reuse of data blocks, the method comprising the steps of:

   receiving from a client program a data block request identifying a data block (col 5, lines

29-32, receiving a URL request);

   obtaining constituent data that comprises the data block (the system determines that the

requested webpage is not cached and retrieves it, Col 5, lines 32-35 and Col 6, lines 18-21) and

deriving a data block identifier related to the data (deriving a state signature for the data using a

hash function, Col 6, lines 21-50);

   determining whether the data block is a registered data block in a collection of

data blocks using the data block identifier (the system determines whether the requested

webpage is cached based on the state signature when a partial URL and associated state

information is provided in the request, Col 4, line 55 – Col 5, line 36 and Col 6, lines 26-39);

when the data block is not a registered data block, registering the data block in the collection of data blocks (caching the document and adding it to the look-up table, Col. 6, lines 26-39);

generating a registration reference for accessing the data block (deriving a state signature for the data using a hash function, Col 6, lines 21-50); and

returning the registration reference to the client program (the computed signatures and/or state information are embedded in the requested webpage and sent to the client, Col 7, lines 3-20).

Gheith disclosed that the invention substantially as claimed however Gheith failed to explicitly recite deriving a data block identifier for the data block from the constituent data for the data block. Instead Gheith disclosed determining the identifier based on the state information and the file name requested. Nonetheless, such a scheme was widely known in the art at the time of Applicant's invention. In a similar caching system, Gupta disclosed deriving a data block identifier from the constituent data of the data block (see inter alia Gupta, Col 3, lines 47-54 and Col 5, lines 2-22). Gupta uses this hash identifier to perform a comparison with the cache entries in order to quickly tell if the particular data block is already cached (Gupta, Col 5, lines 2-22). Thus, it would have been obvious to one of ordinary skill in the art at the time of Applicant's to incorporate Gupta's data identifier comparison scheme within Gheith's system in order to provide "a quick determination of whether there is a match or not" in the cache (Gupta Col 5, lines 13-22). Furthermore since Gupta's identifiers are based on the content itself and they would provide better detection of changes to particular files when compared to Gheith's system that only identifies state information associated with a filename.

In considering claim 2, Gheith further discloses that the step of receiving comprises receiving from the client program a request data object comprising a data block identifier and at least one of the data block and a pointer to the data block (Col 7, lines 3-20, i.e. the client requests the embedded files by referring to a file identifier which is a pointer embedded in the webpage).

In considering claim 3, Gupta further discloses that the step of deriving comprises the step of generating a codeword based on the constituent data (e.g. hash value, Col 3, lines 46-64).

In considering claims 4, 5, 18, 19, 36, 42, 43, and 45, although the system taught by Acharya discloses substantial features of the claimed invention, it does not disclose that the data block identifier is derived in part based on a CRC or ADLER codeword, or a sequential request number. Nonetheless, Gheith does disclose that the link identifier is sent over a network. For the link to be sent across a network, it will necessarily need to be placed in an Internet packet. Examiner takes Official notice that the Web generally uses TCP/IP or UDP/IP packets and often uses Ethernet, and further takes Official notice that TCP and UDP use a 16-bit checksum sequential number field, while Ethernet uses CRC to ensure data reliability. Applicant further admits that the CRC and ADLER checksums are well known in the art (see ¶ 61 of specification). Thus, given the knowledge that TCP or UDP and Ethernet can be used to transport the data blocks taught by Acharya, and further given the knowledge that CRC, ADLER, and 16-bit checksums are well-known techniques, a person having ordinary skill in the

art would have readily recognized the desirability and advantages of including the CRC or

ADLER checksums or a sequential 16-bit number in the identifier taught by Acharya to ensure

that the data block identifier is correctly sent over the network. Therefore, it would have been

obvious to include the CRC or ADLER checksum or the sequential number in the data identifier

taught by Acharya.

In considering claim 6, Gheith further discloses that the step of deriving further

comprises the step of deriving the data block identifier based additionally on data block

characteristic information (e.g. a state signature for the data, Col 6, lines 21-50).

In considering claim 7, Gheith further discloses that the collection of data blocks is a

linked list of data blocks (e.g. look-up table; Col 6, lines 21-50).

In considering claim 8, Gheith further discloses that the step of receiving comprises the

step of receiving the data block request at a registration server from a requesting program (e.g.

receiving the request from a client browser).

In considering claim 9, Gheith further discloses that the step of registering comprises the

step of adding the data block to a linked list of additional data blocks that comprises the

collection of data blocks (e.g. look-up table; Col 6, lines 21-50).

In considering claim 10, Gheith further discloses that the step of generating a registration reference comprises the step of generating one of a pointer and a handle to the data block (i.e. a link or pointer embedded in the page, Col 7, lines 3-20).

In considering claim 11, Gheith further discloses that the step of generating a registration reference comprises the step of generating a registration handle object comprising a reference to a resource allocated for the data block (i.e. a link or pointer embedded in the page, Col 7, lines 3-20).

In considering claim 12, Gheith further discloses that the resource is one of a memory area allocated for the data block and a process started in connection with the data block (i.e. a link or pointer embedded in the page, Col 7, lines 3-20).

In considering claim 13, Gupta further discloses that the step of determining comprises the step of comparing the data block identifier against additional data block identifiers for additional data blocks in the collection of data blocks (Gupta Col 5, lines 13-22).

In considering claims 15-17 and 20-27, these claims present a computer readable medium for performing the same steps as claims 1-3 and 6-13 respectively, and are thus rejected for the same reasons.

In considering claims 29 and 31, the limitations in these claims are similar to those already discussed with regard to claims 1-13, and are disclosed in the same cited sections of Acharya discussed above.

In considering claims 30, 32, and 39, Gheith further disclose releasing duplicate resources (Col 7, lines 23-31).

In considering claims 34, 40, and 41, these claims present data processing systems and a computer readable memory device for performing no additional steps over claims 1 and 9-11, and are therefore rejected for the same reasons.

In considering claim 35, this claim contains the same limitations as claim 3, and is thus rejected for the same reason.

In considering claim 37, Gheith further discloses an analysis component comprising instructions that examine the registration handle object to determine whether a client terminal received the requested data block in response to an earlier request (Col 5, lines 13-24).

In considering claims 47 and 48, Examiner takes office notice that the use of link lists (i.e. nodes with a pointer to next node) for effectively storing sets of data were widely known in the art at the time of Applicant's invention. Thus, it would have been obvious to one of ordsiary

skill in the in art at the time of Applicant's invention to store Gheith cached entries in a linked

list in order to effectively store the cache entries.

Claims 44 and 46 are rejected under are rejected under 35 U.S.C. 103(a) as being

unpatentable over Gheith (U.S. Patent Number 7,082,454) and Gupta et al. (U.S. Patent

Number 6,553,461; hereinafter Gupta) and Copeland et al. (U.S. 6,615,235; hereinafter

Copeland).

With regard to claims 44 and 46, Gheith failed to specifically recite the registration data

object further comprises a plurality of client terminal identifiers each associated with a client

terminal request identifier. Nonetheless associating specific pieces of content within a webpage

with a particular user when caching dynamic content was widely known in the art at the time of

Applicant's invention, as evidenced by at least Copeland Col 8, line 26 – Col 9, line 18). Thus, it

would have been obvious to one of ordinary skill in the art to associate specific pieces of content

within a webpage with a particular user when caching the content in Gheith's system, in order to

help ensure that user specific only sent to the correct user.

Conclusion

2.   The prior art made of record, in PTO-892 form, and not relied upon is considered pertinent

to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean Reilly whose telephone number is 571-272-4228. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 6, 2007

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